**Demetri Kofinas:** What's up, everybody? Welcome to another episode of Hidden Forces with me, Demetri Kofinas. Today I speak with Lacy Hunt, Executive Vice President of Hoisington Investment Management Company, a registered investment advisor specializing in fixed income portfolios with over $3 billion under management. For nearly 14 [00:00:30] years, Dr. Hunt was Chief U.S. Economist for HSBC Group, one of the world's largest banks. He was also Executive Vice President and Chief Economist at Fidelity, and also held the position of Senior Economist for the Federal Reserve Bank of Dallas.

Debt, deflation, poor demographics, a historically low savings rate, rising inequality, falling productivity, and the financialization of the global economy. How do all of these phenomena derive from a single economic force? [00:01:00] The persistent willingness of governments to bail out financial markets time and again. Flooding the banking system with cheap money by bidding up asset prices at the expense of the broader economy. This is a conversation full of data, statistics, and econometrics: bank lending, money velocity, monetary aggregates, disposable income, liquidity coverage ratios, and credit spreads. But it also a story about how we manage, despite the warnings of history, to [00:01:30] repeat the blunders of economies past. Replacing credit for capital and liability for effort. How will we navigate the next recession having wasted the last eight years chasing the shadows of wealth through buy backs, stock appreciation, and financialization? Where will the demand come from in a consumer led economy with diminishing savings rates and rising interest expenses? What about our unfunded liabilities, mortgage payments, rents, and college tuitions? How does all [00:02:00] this tie back into the resurgence of populism and the escalation of geo-political tensions in a world tied together by our liabilities, but torn apart by the sector of conflict, the failures of diplomacy, and the expediency of war?

As always, you can gain access to reading lists put together by me ahead of every episode by visiting the show's website at HiddenForces.io. Lastly, if you are listening to the show on iPhone or Android, [00:02:30] make sure to subscribe. If you like the show, write us a review. If you want a sneak peek in to how the show is made or for special storylines told through pictures and questions, then like us on Facebook and follow us on Twitter and Instagram @hiddenforcespod.

Now, let's get right to this week's conversation.

Dr. Hunt, welcome to Hidden Forces.

**Lacy Hunt:** Great to be with you.

**Demetri Kofinas:** It's great having you in the studio. So I wanted to have you on the program, as I said to you, I believe I first, not first, but I believe I saw you at Grant's [00:03:00] conference speak. I go to Grant's regularly whenever I can. But I'm also familiar with your work, particularly in demographics and looking at structural demographic issues. That's something that I particularly want to focus on today because it's something that we haven't had a chance to cover on the program. But I think we have enough time to really get into everything.

I want to sort of preface our conversation for the audience by saying that this, to me, I'll give you sort of unleash my bias what I sort of think and how I see things. I feel that we're living in the aftermath [00:03:30] of a failures, of the unrealized failures of 2008. I think since that time, since 2008, the monetary authorities and governments and central banks did what they could to sort of minimize the impact of asset price deflation and coddled the financial industry at the expense of the broader economy. And what we're seeing today are sort of the perverse effects of all that, which is what I wanted to get into with you, not just in the U.S. but I think China. We've covered China on the program. Europe has suffered greatly [00:04:00] as a result of these types of policies. Why don't you talk to us a little bit about your approach, how you view the world, how you begin to think about all this stuff, and sort of what your take on this is.

**Lacy Hunt:** Well, I think that the debt process really traces back before 2008. 2008 was the first serious manifestation that too much debt is adversarial to economic growth, but the debt had been rising in the government sector and in the non-financial [00:04:30] sector very dramatically since the early 1980s. So the problems were building. I think that in even some of the underlying origins occur before 1980.

**Demetri Kofinas:** Like what? Can you give us some examples?

**Lacy Hunt:** One, when Nixon closed the gold window.

**Demetri Kofinas:** '71.

**Lacy Hunt:** Whenever policy mistakes were made in the period where we had to meet foreign official demand for gold, the dollar would come under [00:05:00] attack and the foreign exchange markets would then give a signal to the policy makers that they were veering off course. Once the dollar was freely floating, then there was no policy signal. So the politicians were free. Politicians of both parties to continue to accumulate debt.

**Demetri Kofinas:** You're talking about Bretton Woods, the system that was loosely tied to gold after World War II.

**Lacy Hunt:** Yeah, but it was tied enough. So when there was a problem, [00:05:30] gold would leave the country. I think we had a chance in the early '80s to make the floating rates system work and there was an effort by a large number of economists to force a constitutional amendment to the Constitution that would've required a 60% vote to override a balanced budget. In other words, it had to be a clear emergency [00:06:00] of some kind.

**Demetri Kofinas:** That's the Balance Budget Amendment.

**Lacy Hunt:** Yeah. A balanced budget amendment. It passed the House and the Senate. Reagan was president at the time and he supported it, but it did not get the two thirds vote to go to the various states to ratify. So since that time, the debt levels have risen very dramatically and that happens to coincide with when the peak in interest rates occurred. It's not entirely that reason, but debt, [00:06:30] we have to understand, is an increase in current spending in exchange for decline in future spending, unless the debt generates an income stream to repay principle and interest. What we're veering to is more and more consumptive type debt. Debt that does not generate that income stream. Debt is not a solution any longer.

**Demetri Kofinas:** Let's talk about debt a second here. Let's see if we can have a philosophical conversation around what it is because it gets thrown around a lot as a word. I don't think [00:07:00] people have an accurate view of it or at the very least contemplated it. How would you define debt for our audience what debt is?

**Lacy Hunt:** Well, debt can be an obligation of any type in the private or the governmental sector. It requires a prepayment of or forward payment of principle and interest. To be effective in stimulating economic activity it has to be used very judicially. Let [00:07:30] me give you an example. Of course, I'm a macro economist. I studied macroeconomics. It's my main specialty. But in the course of my academic career, I also took some courses in consumer finance, business finance, state and local finance. The stogy old professors in consumer business and state and local finance taught financial integrity. They made it very clear that if you become [00:08:00] heavily indebted, you can create a ruinous a situation for the family, for an individual firm, big or small, and even for state and local governments.

But in the day, back in the day, there was a Keynesian exemption for the federal government. That there, the government could borrow money and spend it for whatever reason and you would increase the GDP by four or five dollars. Now it is very painfully clear [00:08:30] that there is no Keynesian exemption for macroeconomics. That any type of federal spending at this stage in the game whether it's for tax cuts, infrastructure program, affordable care act, whatever. If its debt financed, you will not boast GDP. You can improve individual components of the overall economy.

**Demetri Kofinas:** Give us some of those numbers. You're talking about sort of the return on credit that you get for every dollar GDP.

**Lacy Hunt:** Well, I have run [00:09:00] statistical tests looking at the relationship between real GDP per capita and real government debt per capita since 1950. Everything excluding the World War II period, which is clearly exceptional because government spending was a record share of economic activity and it constitutes the largest share. But from 1950 forward, which is 76 years. Long period of time. The co-efficient is slightly [00:09:30] negative. It's like -0.04, which means that if you engage in a dollar of debt financing, you will shrink the GDP by $1.04.

**Demetri Kofinas:** You're talking about the fiscal side here. Fiscal spending.

**Lacy Hunt:** On the fiscal side.

If you want to look at it in a general sense, what it basically means is the co-efficient is essentially zero. In 1821, the great economist David Ricardo, who gave us diminishing returns [00:10:00] and comparative advantage, basically said that it was zero. Now we're at that situation. The debt financing is not going to benefit economic activity.

**Demetri Kofinas:** One of the things that you hear often with respect to debt is that it doesn't really matter. You can just kind of cancel debts out and it's no big deal. I think there is a lack of understanding I think also for people around how significant the effect of debt is in creating structural changes in an economy. [00:10:30] How significant do you think the growth of private sector debt financing and consumer debt and everything, the total debt that we've seen in economy since the early '80s has been restructuring the way that this economy operates so that it becomes exceedingly difficult to return to something that is more capital financed?

**Lacy Hunt:** Well, the consumer sector is the greatest concern to me. Since 1900, the personal saving rate, which would be household income [00:11:00] from all sources including transfer of payments, less taxes, interest payments, and adjusted for or divided by total personal income is currently 3.1%. Historically since 1900, we've averaged about 8.5%. All of this saving appears to be in the top quintile. Consumers have been living considerably beyond their means because income is not rising enough and at a fast enough [00:11:30] pace to generate a higher standard of living, but our people still have aspirations. But the combination of the weak income growth and the low saving rate suggests to me that this is going to cause major changes going forward.

**Demetri Kofinas:** These are trends that we've been seeing for a while, for decades now.

**Lacy Hunt:** Yes.

**Demetri Kofinas:** They've been covered by debt.

**Lacy Hunt:** Some of these patterns are becoming evident. There's two things that have me concerned the most. [00:12:00] We have millions of households that want to send their children to college. That's the American dream, right? But they neither have the income nor saving to do so. Now, the debt option is still available to them. But the income growth, the longer-term secular trends in income growth that we're witnessing are so weak that if the debt is taken on, those loans are going to be need [00:12:30] to be paid off for the next 30 years, maybe longer. So they're going to have to be very, very hard choices made concerning college education.

Another element in the mix is that the percentage of households that are able to buy the beloved family home is going to be a more [00:13:00] and more difficult choice. So these sort of elements ... The problem originated by taking on more and more and successively levels of debt. Each successive cycle we paid off some of the debt, but we never got back to the original levels. And so now the option to use debt is still believed to be a successful alternative, but it is not.

**Demetri Kofinas:** So [00:13:30] can we talk a little bit about the impact of bailing out the creditors, not just consumer credit but I mean credit extended by financial institutions? That this has been a practice that we've engendered over and over again. In a capitalist system without the capacity to fail on the credit side, what does that do in terms of restructuring the economy? Again, because for me, I see that across so many areas and we'll get into some of these more specific examples. But how significant is that [00:14:00] as a driver for where we are today in particular with the gross levels of wealth and income disparity in the country?

**Lacy Hunt:** Well, there was a very famous economist at MIT, his name was Charles Kindleberger, wrote 19 or 20 books in economics. One of which was *Manias, Panics, and Crashes*. Classic book.

**Demetri Kofinas:** We actually had Robert Johnson on the program of Soros fame who learned under Charles Kindleberger and we talked about that.

**Lacy Hunt:** I had an acquaintance [00:14:30] with Kindleberger myself. Kindleberger said that when you have a debt crisis you have two options: you can resort to heroic efforts, or you can let it burn out. Now, we actually have one notable case of where we became extremely over indebted. That was in 1860's and early 1870s. We were building the railroads and multiple [00:15:00] transcontinental railroads, feeder lines and industries. There was over-speculation and over-investment. The panic here was 1873. There was no option for heroic effort.

**Demetri Kofinas:** The National Bank Act, but there was no Federal Reserve.

**Lacy Hunt:** There was no central bank and there was no support for not balancing the budget. So we had a very, very difficult time, a deflationary period, [00:15:30] that lasted about 20 years.

**Demetri Kofinas:** 1873 to 1893.

**Lacy Hunt:** 1893 there about and even maybe a little bit intermittently beyond that.

**Demetri Kofinas:** That was an epic, the period of the railroad boom is an epic period in financial history.

**Lacy Hunt:** The panic here was 1873. Grant was president. He has no idea what's hit him. It was very similar to [00:16:00] the massive build up in debt in the 1820s and '30s. That was the steam ship lines, the canals, the early railroads then over-investment, over consumption. The panic here was 1938, Van Buren was president. He has no idea what's hit him. We have 11 difficult years. Van Buren gets bailed out by the discovery of gold in California, which finances the westward expansion. In the 1850s is our best decade of peace time growth.

**Demetri Kofinas:** Because that would've been the equivalent ... I'm [00:16:30] sorry to interrupt. But because of the fact that the world was operating on a gold standard that was like not printing your own money, but that was actually finding money that was buried somewhere.

**Lacy Hunt:** Yes. It also produced extraordinary income gains and people lived within their means because they had been burned and they paid down the debt of the 1820s and '30s.

**Demetri Kofinas:** I'm familiar with the case also of Spain during the 1500s when the inflation that occurred in Spain as a result of the Conquistadors in Latin America finding all that gold. Although there they had massive amounts of inflation. I don't if they had the same level of debt.

**Lacy Hunt:** But that was without a debt build up.

**Demetri Kofinas:** Which is why they had the inflations.

**Lacy Hunt:** Basically, you got more and more inflation and it undermined productivity. The wealthier classes became extremely lethargic. That's a really different situation.

But to go back to this example in 1873, there was no heroic response. [00:17:30] But it was done in 17 to 20 years. Well, Japan became extremely over indebted in 1989. What have they done? One heroic measure after another. So many different programs that people have lost track. I used to keep track, count.

**Demetri Kofinas:** The heroic measures, in your definition, are the monetary ... Are the response ...

**Lacy Hunt:** Monetary and fiscal. In other words, that's what Kindleberger ... In other words, where government policy, people are hurting and government policy steps forward to try to [00:18:00] shorten the time span.

**Demetri Kofinas:** Well, Japan is a very instructive case, right?

**Lacy Hunt:** Well, just compare the 1873 no heroic effort, with Japan heroic efforts now since 1989. Well, if Japan had done nothing as we did by necessity after 187-, they'd be out of the problem. But they're not out of the problem. The debt levels continue to reach new peaks.

**Demetri Kofinas:** So except in Japan’s case, just to prefaces ... To draw this distinction for [00:18:30] the audience. This was a problem of private debt, correct? The private sector in Japan had taken on tremendous levels ...

**Lacy Hunt:** It started in the private sector but then it became a public debt problem.

**Demetri Kofinas:** As a result of the heroic efforts that we're describing there. Of course, the general criticism of the mainstream communities that the Japanese didn't respond fast enough. But you've also made the case before I believe that the Fed did what it had to do in terms of bailing out the economy as lender of last resort. That it had to do that, but then subsequently all the policies after that were the problems. Just when we're talking about Japan, how does [00:19:00] that figure in terms of Japan? Because the argument there is that they didn't start fast enough. I know we're in a slippery slope here as well, right? I want to point that out, which is we're talking about a system that has many faults to it, and we're trying to sort of deal with problems that emerge from a poorly designed financial system. So I just want to preface that as well, but go ahead.

**Lacy Hunt:** Well, here's the bottom line, Japan basically failed. We have basically failed because [00:19:30] an indebtedness problem is not going to be solved by taking on more debt. If you look at the extensive work done by Mackenzie Global Institute, what they show in these 24 cases of advanced economies that become over indebted and there's a passage of enough time so that they can trace the problem to solution. Mackenzie indicates that in all cases the problem had to be solved by a sustained [00:20:00] period of austerity, which is a multiyear rise in the saving rate. You're not going to be able to solve an indebtedness problem by taking on more debt. You just push the problem further and further into the future while sacrificing growth and a whole lot of other things.

**Demetri Kofinas:** Let's talk about how that impacts demographics and how demographics impact that, how that's a feedback loop. One of the interesting ... I actually printed out a few charts here. I wanted to draw some comparisons, and I grouped some nations together. I grouped the United States, the UK, [00:20:30] France, Germany, and Switzerland together. But then I also looked at some countries like Italy, Spain, Greece. Greece's fertility rate, in particular, was shocking. It has dropped tremendously during the period of the crisis. That only compounds existing demographic problems. The Japanese have the worst demographics of any industrialized nation. How do demographics factor into this discussion?

**Lacy Hunt:** Well, the deterioration in demographics is a symptom and it is caused by the [00:21:00] over indebtedness which weakens growth. But demographics then produce their own effects. When you have less population growth, we have a baby bust in this country right now. Fertility rates at an all-time low. We have a household formation bust. Babies are expensive. Households are also expensive. They're conducive to growth. One of the things that people do not realize that if you go back to the '60s [00:21:30] and early '70s, population growth in Japan was faster than in the United States. As they went down this debt path, the higher and higher levels of debt, the Japanese population has now turned negative. It's weaker than in the U.S.

**Demetri Kofinas:** There's some visual charts of the Japanese population. 1950 was effectively a pyramid. The projections for 25th here are an inverted pyramid in terms of the base being very [00:22:00] old. In fact, I think there's a statistic that says that there are more diapers now sold to old people in Japan than there are to babies.

**Lacy Hunt:** Not aware of that.

**Demetri Kofinas:** It's quite a visual.

**Lacy Hunt:** The demographics are a symptom of the over indebtedness. The deterioration in productivity is a symptom. But then it has consequences in itself. An extreme over indebtedness where you have too much debt, too much of the wrong type of debt, does not [00:22:30] generate an income stream. You also cause a decline in the velocity of money. When that happens ... By the way, money velocity now is at the lowest level since 1949.

**Demetri Kofinas:** We've discussed this issue a bit with a number of our guests in the past, in particular with Chris Cole when we discussed volatility and the specter of inflation. Why don't you tell our audience a little bit about what money velocity ... How it's measured and what the impact of that is on the economy and on inflation and deflation.

**Lacy Hunt:** [00:23:00] Well, money velocity, how it's measured is not critical to understanding velocity. The equation of exchange said that nominal GDP is equal to money times velocity. Velocity picks up if you're generating an income stream to repay principle on interest, velocity will rise over time. Now, velocity is in fact a very complex variable. It's determined by many, many factors. [00:23:30] But the most important of which, in my view, is the productivity of the debt. When you become over indebted, then velocity falls.

**Demetri Kofinas:** It's also a measure of economic activity in a way, right?

**Lacy Hunt:** Well, it picks up the shadow banking system. Between what's happening to the rate of growth in money and the rate of growth in velocity, you've covered it all. If there are great innovations taking place in financial transactions [00:24:00] and so forth and so on and new ideas and people say they are, well, that's fully captured in the velocity of money. The fact is that we know that these new ideas and concepts are being put to work, but still velocity has fought… In 1997 when velocity peaked, one dollar of M2 growth resulted in $2.12 of GDP growth. In the latest quarter, one dollar of M2 growth generates only $1.43. [00:24:30] Velocity has, if you look at the data going back to 1900, you will see that velocity peaked in 1918. The debt levels went higher, much higher after 1918, but the velocity fell for almost a decade before the Great Depression. Velocity fell from 1997 until 2008. The substantial decline then continued falling lower. So once you've [00:25:00] undermined the velocity, then monetary policy is really asymmetric. Monetary policy wouldn't win. If the Fed tightens in a highly leveraged economy, a little bit of tightening goes a long way. But when they ease in a highly leveraged economy and the velocity of money is declining and the interest rates are close to the zero bound, then a lot of Fed [00:25:30] action produces very little benefit to the economy.

**Demetri Kofinas:** What has been the impact of the Fed's recent tightening and the unwinding of the balance sheet on the yield curve and the distribution of interest over time?

**Lacy Hunt:** Well, we're seeing that effect. What folks need to understand is that the short-term rates are determined by the intersection of the demand and supply for short term credit. While [00:26:00] the Federal Reserve has to work with whatever the demand for credit is, they have enough control over the monetary base that they can basically set the short rates. But when the Federal Reserve raises the Federal Funds rate, they don't say, "Rise federal funds rate, abracadabra." What they have to do is they have to shrink the monetary base and that shifts [00:26:30] the credit supply curve inward. It catches the downward sloping demand for credit curve at a higher interest rate. So the rate goes up, the monetary base, which is the invert, it's sitting at the base of the inverted pyramid, which is the U.S. financial system.

**Demetri Kofinas:** You're talking about the money multiplier effect, right? The base is the money that's created by open market operations of the Fed by purchasing let's say Treasuries or whatever they're ... That's the base money that they cannot contract further. Everything else is effectively [00:27:00] built off of loans, off of credit extends.

**Lacy Hunt:** So M2 is equal to the base times the money multiplier. But when you're extremely over indebted, the money multiplier falls. It fell during the '20s and '30s, and we're falling again.

**Demetri Kofinas:** Because there's a level of saturation. I mean, there are multiple variables that you're touching on here that affect that break, that multiplier. One of which is when you have taken on too much debt, you're not looking [00:27:30] to take on anymore.

**Lacy Hunt:** That is correct. The banks don't have the capital. They may the reserves to take the debt on, but taking on debt exposes bank capital. The money multiplier fell in 2008 from roughly eight, which was its hundred-year average, down to 2.6 right now. 3.6, I'm sorry.

**Demetri Kofinas:** That makes me wonder, now that you say that, it makes me think about Dodd Frank and the implications of some of the capital buffer requirements in [00:28:00] that legislation. How does that affect this unwind?

**Lacy Hunt:** Well, the Dodd Frank legislation ... The banks have to operate under the Federal Reserve Act of '37, and under the Federal Reserve Act of '37 you just have to maintain reserves on your deposits. But the Dodd Frank legislation requires that the banks, the large banks, the ones with extreme international exposure, they have to have a 100% [00:28:30] liquidity coverage ratio. The liquidity coverage ratio means that they must have enough in liquidity to cover the gross outflow during the stress test period. So one of the things that's happened, if you look at excess reserves, there appear to be sufficient excess reserves. But that doesn't take in this side bar legislation, which demands a 100% liquidity coverage ratio. Some folks said [00:29:00] when the Feds started tightening, that the banks would continue lending. But there was this other constraint.

**Demetri Kofinas:** Because they were looking at the excess reserves and they were saying there's plenty of money.

**Lacy Hunt:** Only thinking about it in the traditional sense that the banks are totally controlled by the '37 act. So the Federal Funds rate went up and the key credit aggregates peaked within four or five weeks of [00:29:30] the first Fed tightening in December of 2015. At that point in time, bank loans and non-financial paper peaked at around 8% growth rate. Currently, we're under four.

**Demetri Kofinas:** So we've seen a steep drop in bank lending.

**Lacy Hunt:** Yes, we have. By the way, in the latest 12 months, the very critical commercial and industrial loan category is virtually unchanged. Virtually unchanged. Also, of course loans are on the asset side of the bank balance sheet. Deposits [00:30:00] on the liability side. They're part of money supply. So what has happened is money supply growth has been cut from 7% per annum to 4% per annum, and the velocity of money is still falling. So what you have today is you have a rise in the Federal Funds rate, the monetary base is contracting, the rate of growth in the monetary and credit aggregates is slowing dramatically, and the yield curve is inverting, which is indicative [00:30:30] that monetary restraint is well entrenched in the financial system. What typically happens is that this process develops before it becomes apparent in the economic indicators. But it always becomes ...

**Demetri Kofinas:** These are leading indicators.

**Lacy Hunt:** They are leading indicators.

**Demetri Kofinas:** So when you look at these indicators and you sort of project forward, what are you looking at? Do you have a time horizon that you're looking at for the ... Because recessions come and we are ... They always come. There's no way that you can't have a recession. [00:31:00] We are long overdue in terms of historically for a recession. I think we're, what? 120 months past due.

**Lacy Hunt:** We're at an advanced state expansion. Advanced state, we've run 100 months. This is a poor expansion, but it was long running. Late stage expansions are different because pent up demand is exhausted. When you have a steep recession, people don't buy a new plant, they don't buy automobiles, they don't buy houses.

**Demetri Kofinas:** Because they've already bought them.

**Lacy Hunt:** They bought them, and we have a large stock of new motor vehicles. [00:31:30] We've got a transitory lift because a lot of vehicles were destroyed by the natural disasters. But we have ... The pent up demand for automobiles is assenter. One of the clearest areas ... Two of the clearest areas where pent up demand is exhausted is in apartments and retail properties. Apartment construction was the strongest component of this recovery. There were time periods [00:32:00] when it was growing 50% to 60%. But now we have over built in a lot of markets and rents on apartments are starting to come down. Apartment construction is falling. We're also beginning to see very large increases in vacancy of store fronts, strip centers, shopping malls. Some of this may be changes in the way we buy things. But the retailers are doing poorly. So we're not going to [00:32:30] have a renewed bound.

Here is one important area, which I think is being overlooked. There is this argument where at least we have capital spending. Well, if capital spending is going to be surging ahead, why are commercial and industrial loans unchanged in the last 12 months? Also, why is there a need for a lot of new capital stock when in the manufacturing sector, we're operating at 75% [00:33:00] of capacity when typically, in a late stage expansion, we're at 79% of capacity. So the pent up demand appears to be exhausted and monetary and fiscal policy have very limited capabilities.

**Demetri Kofinas:** What are you looking for? I mean, these are forward indicators, like you said. These are leading indicators to other economic indicators that the Fed looks at when they decide whether they're going to loosen or not. How are you positioning your firm and yourself, and do you have a time horizon that you're looking at? Do you have a probability [00:33:30] function that you can express sort of qualitatively?

**Lacy Hunt:** Well, let me just say something that I think the Fed is really almost ignoring, except at the staff level, the variables which they themselves control. The reserve aggregates, the monetary aggregates, the credit aggregates, the velocity of money.

**Demetri Kofinas:** They pollute their own indicators.

**Lacy Hunt:** They are basically focused on the Phillips curve. The Phillips [00:34:00] curve, in my view, is not valid empirically nor theoretically.

**Demetri Kofinas:** Let's give our audience a definition of what the Phillips curve is.

**Lacy Hunt:** The Phillips curve says that as the unemployment rate goes down, the rate of increase in wages rises. But that only happens if you assume that people are fooled by the difference between change in nominal and real wages. Once you test the relationship between the unemployment rate and the Phillips curve, you see that there is no relationship.

**Demetri Kofinas:** That was first challenged in the '70s, wasn't [00:34:30] it, with this type of inflation?

**Lacy Hunt:** Yes, by Professor Edmond Phelps at Columbia and by Milton Friedman in independent papers. If you run all the data from 600 observations since 1965, you will see there's no Phillips curve relation. Now a lot of the staff folks at the Board of

Governors will say, "Well, you've got aggregation problems. Lead and lag problems. Once those are cleared up, the Phillips curve will come forward." Well, I say, "Okay, but [00:35:00] in the meantime, until you're able to solve the aggregation problems and the lead and lag problem, it should not be used." I think that probably one of our greatest Federal Reserve chairman was Paul Volcker. Volcker used to give what was called the Anti-Phillips curve lecture. To me, if you look at aggregate demand and aggregate supply, what you see is that to get inflation, the aggregate demand curve shifts upward. [00:35:30] It cuts the upward sloping aggregate supply at a higher price level. But to lift the aggregate demand curve, you have to move it up by either increasing money supply or experiencing a rise in velocity. So Arthur Burns, who was chairman of the Fed when I was there. He was not there when I entered the Fed, but he was a great business cycle.

**Demetri Kofinas:** When you were at the Dallas Fed?

**Lacy Hunt:** Yes. William McChesney Martin was chairman when I entered and then Arthur Burns was. [00:36:00] In those days, they viewed inflation by the following three phrases. They called it a money price rage spiral. In other words, money growth accelerates without an offsetting change in velocity. This shifts the aggregate demand curve upward. The price level rises and then wages follow. None of the great classical economists including people that were pure business cycle economists said that [00:36:30] inflation starts with wages. It starts with money, money moves upward, prices rise, and then all other factors of production follow it. Whether it's wages or land or what have you. The Federal Reserve, currently by focusing on the Phillips curve, does not develop a strategic view of the world. They're focused on the Phillips curve thinking that that will somehow lead to inflation. That's not the way the world works.

**Demetri Kofinas:** So there's a few great points here. One is just generally [00:37:00] recognizing that the monetary authorities are using models that you and others, and I myself, think are outdated and, in some cases, totally useless. But in doing so, it explains their appetite for fixed income acquisitions for flooding the market with liquidity for monetary easing, for generating all of these excess reserves on bank balance sheets, not just to save the financial system but with the expectation that somehow flooding [00:37:30] the system with credit and increasing base money would generate the type of lending required to just magically raise economic growth. But we're seeing that that's not the case.

**Lacy Hunt:** But I will say this, now they're engaged in quantitative tightening. They're liquidating $10 billion of government and agency securities a month. In fact, they've already liquidated more than $10 billion just in the last several weeks. For the fourth quarter, they will liquidate $30 billion. Then the rate of liquidation [00:38:00] goes up in the first quarter. Well, the money multiplier is currently 3.6. In other words, each dollar reduction in the base will reduce the money supply by $3.60. So, money growth has already decelerated from seven to four, and by the end of the year M2 growth may be down to 3%. Less than half of what it was. [00:38:30] If they were to carry out their quantitative tightening, which they've talked about, a year from now M2 will be contracting by 2.8. When you ease monetary policy, do quantitative easing, the benefits are very minimal but because of the over indebtedness situation, the little bit of quantitative tightening ... In fact, we have two earlier episodes of quantitative tightening. One in between [00:39:00] QE1 and QE2 and then between QE2 and QE3.

So in QE1, the balance sheet was expanded $800 billion. Similar amount under QE2. There was a very minuscule reduction of the balance sheet. In QT1 and QT2 and guess what happened immediately. The economy slowed, the bond yield dropped precipitously, and the Federal Reserve, after the most minimal quantitative tightening had to [00:39:30] reverse and ...

**Demetri Kofinas:** Another way, I mean, there's so many ways to draw analogies. Just one that comes to my mind now as you're talking is that it's sort of like having ... Your lungs are failing. I'm using an analogy. I'm creating one right now on the top of my head, which is your lungs are failing you. That in order to continue to breath, normally you need to introduce more and more oxygen into the lungs manually. So that's what they're doing by lowering interest rates and by flooding the market with liquidity. Then when you see that you try to get the patient to breathe normally, you see that the patient cannot because [00:40:00] it's flooded with debt and the interest payments are so high.

**Lacy Hunt:** The way I like to say it is that by allowing the economy to become extremely over indebted, acquiescing to it, the Fed is essentially putting themselves out of business. Except when they're tightening. When they tighten, they can have a great impact.

**Demetri Kofinas:** That's a great point because the tool of Fed action is the yield curve, it is interest rates, it is credit, it is the money supply, and when they have saturated the market to this extent, they've lost the capacity to do anything other than wreck it. But they have managed [00:40:30] to do one thing, which is to levitate asset prices. We've seen a tremendous rise in equities and financial assets across the board since 2008 that has not paralleled at least the feeling, let alone the statistic, but the feeling of the citizenry. I think that is interesting because ...

Now I'm veering off a little bit here in my thought process. But one of the things that we also talk about on the program is the stabilizing effect that volatility has. Credit market volatility, financial volatility. It's something that [00:41:00] you mentioned Paul Volcker. We've talked about his Saturday night special on the show. We've talked about the way in which Volcker managed to beat back the forces of inflation by pegging the money supply and not focusing on the price of money. That level of volatility is very significant. We've taken that out of the market and we've seen really this a lot of perversions have occurred. One of those has been something that you and I spoke briefly about before we started recording, which is something we spoke about with Christopher Cole as well, which is [00:41:30] this stock buyback phenomenon, which has also I think a deleterious effect on investment and on productivity. Speak to us a little bit about that with this one perverse outcome.

**Lacy Hunt:** This is a critical point. When the Fed unveiled quantitative easing, they said that one of their objective was to boost the stock market. They made that clear. The business managers, the corporate executives heard that. So [00:42:00] they interpreted the Fed as saying that financial investments will be protected by us to whatever extent that we can. Well, financial assets are a lot more liquid than real assets, but economic growth, productivity require physical assets. And so what basically happened is that assets were taken from the real economy and invested in the financial economy. In fact, there was [00:42:30] a very extensive, well written piece of research by Michael Pence, the Nobel Laureate, and Kevin Watch, former member of the board, on this matter and what they showed is that the Federal Reserve inadvertently weakened economic growth by encouraging the business executives to move into financial assets.

Let me give you just one example. In 2016 the corporate [00:43:00] sector, the business sector debt increased by about $700-$720 billion, I don't have the numbers in front of me. Investment in plant equipment and inventories actually declined $20-$25 billion. So, you ask where did the money go? Well, it went into paying dividends, buying your company shares, buying the shares of others, [00:43:30] or other types of financial activities. So the corporate business debt, in 2016, the business debt increased $700 billion and nominal GDP was only up $525 billion or there about. So it actually encouraged bad behavior by saying that ... In the meantime, there is absolutely no econometric evidence that there is [00:44:00] a wealth effect except for a very slim slice of our highest wealth individuals. Three quarters of our households simply do not have enough holdings of stock to benefit from the wealth effect.

**Demetri Kofinas:** The wealth effect, just to sort of drive this point home, was what Greenspan relied upon. It's actually very interesting because we did an entire show dedicated to Alan Greenspan with Sebastian Mallaby's biographer because we went back all the way to his presentation to the [00:44:30] American Statistical Association in 1959 about the deleterious effects of financial speculation on asset prices and the way that it accelerated booms and busts. But he supported the idea of a wealth effect in the early 2000s after the 9/11 attacks in order to help the economy sort of build up from the recession.

**Lacy Hunt:** First case was 1987. Economy was very healthy. The GDP growth was 4% in real terms before [00:45:00] October of '87. Wall Street immediately said we were going into a serious recession in '88, and the real growth was 4%.

**Demetri Kofinas:** Because they were ...

**Lacy Hunt:** Yeah. But they eased very dramatically and stock market came back. But essentially what the Fed did beginning in '87, it basically began giving the corporate executives a sign that financial investment was better than real [00:45:30] investment.

**Demetri Kofinas:** Right.

**Lacy Hunt:** Then of course quantitative easing and some other steps along the way have reinforced that process.

**Demetri Kofinas:** It's a focus. In a way, you could say it's focusing on the shadow of wealth as opposed to wealth itself.

**Lacy Hunt:** That is correct. Yeah. In the meantime, we've had a tremendous stock market and the standard of living, real disposable personal income per capita, historically has grown 2.1% and in the last 10 years it's grown at 1%. [00:46:00] In the last year, it's negative slightly. It's a very unfortunate circumstance.

**Demetri Kofinas:** And that's been made up of debt. That will actually transition us to a conversation about China, which I do want to get into because that's been sort of how we've made up a lot of that consumption in the last few decades. But before we do, I want to ask you from the numbers that you've looked at, the productivity numbers, how has this, do you believe, impacted productivity?

**Lacy Hunt:** Well, it's severely. If you look at [00:46:30] productivity by half decades starting in the 1950s, in other words '50 to '54, '55 to '59, you will see that there has been a long term deceleration in productivity and productivity growth in the latest five year period from 2000 through ... I'm sorry from 2005 through 2009 and in [00:47:00] 2010 through 2004, the productivity is now unprecedentedly weak for any half decade period. It's very, very disconcerting and the decline in productivity, of course, is confirmation that we have too much of the wrong type of debt. That's why the velocity of money is falling. What would be troubling is if velocity of money were rising and productivity were, but they're not. They're confirming each other. [00:47:30] The underlying capability of the economy to do better gets weaker and weaker.

**Demetri Kofinas:** As well, implied in sort of this aspect of the conversation, I want to remind the audience, because we've also talked about the price mechanism and the ability to convey information. I wanted to remind our audience that this is kind of what we're getting at here as well, which is that when we're talking about the right ... When Dr. Hunt is talking about the right kind of debt, we're really talking about here is debt that provides for maximum, effective allocation of capital and resources and labor and everything else.

**Lacy Hunt:** Debt to be effective ... [00:48:00] Keynes was once asked about deficient spending, and he said, Well, if the economy's not doing well, you just borrow the money and spend it. It doesn't really matter what you spend it on. You could hire some men to dig a hole. If the first round of deficit spending doesn't work, Keynes said then hire the men to fill the hole back up. Well, it's clear that that is not correct. That debt to work has to be used wisely and judiciously. What that means is it has to be able [00:48:30] to generate an income stream to repay principle and interest. When you do not do that, then basically bad things happen.

**Demetri Kofinas:** Would it also be fair to say that different economic philosophies are more or less effective in different times? I think one of the particular points about today is that we have fewer resources to waste today than we did 60 years ago.

**Lacy Hunt:** Well, because we're so heavily indebted. I think that if you look at was there a time in the U.S. economy when [00:49:00] government debt was helpful? Of course, the great event that everyone cites is World War II. We were building troop transports. We had people working in factories. We had a lot of people in the Armed Forces and so on and so forth.

But let's take 1942, for example. When that year [00:49:30] government expenditures increased by the largest amount ever and government spending was the largest share of GDP ever. Professor Barrow at Harvard has calculated in that year the government expenditure multiplier was 0.6, and then it fell to 0.4 in 1943, which means that you increase spending by one dollar at the federal level, but you actually shrunk the private sector a little bit. What was the key driving force, [00:50:00] even in World War II, was a tremendous surge in exports. Our allies were war zones. They needed whatever we could send to them. We also took over their export markets. World War II had this fortuitous event. It was a terrible event. I mean, 70 million people were killed or 80 million, whatever the number was. But during [00:50:30] World War II, we benefited from this export surge and we also had mandatory rationing. So if you wanted to buy four tires, maybe you could get one. If you wanted 10 pounds of sugar, you might be able to get one or something. And so, the saving rate went up to 28%. There were several years at 25% or higher.

So essentially what World War II did that [00:51:00] made us so healthy and allowed us to have the post war boom, rebuild Europe, rebuild Japan, give people access to our markets. We had paid off the debt of the '20s and '30s and we had a clean balance sheet. What is entirely different from that one example, which laid the foundation for a very strong economy in the United States for the early part of the post war period, [00:51:30] is not here. Because we're trying to solve an indebtedness problem by taking on more debt. We're pushing the saving rate down when it needs to be moving higher.

**Demetri Kofinas:** We haven't acknowledged the losses, and as a result of that we haven't discovered the right path for the economy. The market hasn't been able to clear as effectively is what you're saying?

**Lacy Hunt:** It's in disequilibrium. It's in a debt disequilibrium.

**Demetri Kofinas:** So that kind of brings us to China because China has played a significant role in this as well. We're in a global economy. The [00:52:00] Chinese economy has grown tremendously since the late '80s, early '90s. That has been fueled by the debt that consumers in the United States have been able to take on as well as many other people in the export market. As well as the Chinese financial systems' capacity to generate credit and facilitate that type of investment. How much attention are you paying to China? How do you weave the Chinese economy and the Chinese story into sort of your broader look at the U.S. economy and [00:52:30] the globe?

**Lacy Hunt:** Well, we have a long history of extremely over indebted economies. We have the views from some pretty smart historical figures and then we have more recent work. People don't know the name David Hume anymore, but Hume was a benefactor to

Adam Smith. Inspired Einstein's theory of relativity, according to [00:53:00] Einstein. He wrote a public paper of public finance in 1752, which is on the internet, which you should read. He was able to look at the Mesopotamian empire, the Roman empire, and his concluding phase is that when a government has mortgaged all of its future revenues, the state, by necessity, lapses in to tranquility, languor, and impotence. We have Neil Ferguson's great paper on empires [00:53:30] on the verge of chaos, and he looked at the Mesopotamian, the Roman, the Bourbons of France, the British empire. Debt has greatly debilitating consequences. Sometimes parts of a major empire will survive.

Winston Churchill said the sun never sits on the British empire. Well, the British empire, that's no longer true. England survived but they did not have the financial resources [00:54:00] to maintain their empire at the end of the world. They had to have rationing all the way into the mid 1950s. But it was a very difficult time period because they were just not able to obtain additional debt. Some of the other cases were more difficult and quite nasty. The fall of the Bourbons. The Roman empire, the Mesopotamian. We've seen many smaller empires fail with [00:54:30] too much debt. But even before the failure point, what is clear, as Hume was able to identify, is that when you become extremely indebted you go into this long slow period of decay. That's where we are now. It doesn't mean a crisis is immediately ahead, but it's adversely affecting us in a number of ways. We can see this in the growth rate. We can see it in the standard of living. We can see it in income distribution. We don't have enough growth, [00:55:00] as Ronald Reagan used to say, to lift all boats. John Kennedy said the same thing. One Republican and one Democrat. You have to have enough growth to lift the boats, and we don't have enough growth. The policies that we're pursuing, unfortunately, reduce the capacity for growth.

**Demetri Kofinas:** Do you think there are limits to growth in the long term for the earth?

**Lacy Hunt:** I do not. I will tell you why I do not. They [00:55:30] can be enhanced or diminished by governmental policy. Governmental policy is not neutral. But there was a famous debate between Ricardo, who we mentioned earlier, and Thomas Malthus. Malthus was a fairly famous economist in his own right, but he was also a demographer. He felt that population growth was going to explode and that we would outpace the resources of the world. [00:56:00] The brilliant Ricardo said, "Well, you may be right about population. It could grow very rapidly, but what you're failing to take into consideration is mechanization. That we will be able to do more and more with fewer resources." That process suggests that mankind can move forward over the long run. But it is not guaranteed if you do not pursue the correct governmental policies. Governmental policies [00:56:30] can lead countries down the wrong road. If they were still around to answer, ask the Mesopotamians, the Romans, and the Bourbons of France what happened.

**Demetri Kofinas:** But there are. You wouldn't dispute that there are physical limits to the earth's population growth as well as limitations ...

**Lacy Hunt:** There are resources, but there are signs that the population growth is slowing down too.

**Demetri Kofinas:** Right, which speaks to this entire point, right? Which is the fact that on the one hand, I mean, Japan is [00:57:00] a classic example, and of course debt is playing a role in all of that absolutely. But we can't afford in effect.

**Lacy Hunt:** Adam Smith's great contribution was the invisible hand. Adam Smith said that by everybody pursuing their own interest, society benefits as a whole. The events will send signals to you and me, to businesses, and when the capabilities of [00:57:30] moving forward in one direction are turned off as have repeatedly happened in the history of mankind, then there are incentives to move into other areas, make other decisions. So I believe that economics makes us adaptable. It is not adaptable when we doggedly adhere to policies that are going to have counterproductive results.

**Demetri Kofinas:** Are you concerned about the geopolitical implications of the economic stagnation, especially [00:58:00] when you look at some of the real, sort of just the rise of China, their military ambitions. The issues with North Korea, the populism, and also the immigration from the Middle East into Europe and the effects that climate has on all of that. Do you look at all those things and say, this is a complex stew that is making geopolitical conflict increasingly likely? Do you think about that?

**Lacy Hunt:** Well, in the case of China, I think that they [00:58:30] are basically in the vicinity of their heyday of power. I believe that the Chinese economy, the way I measure it, including all of the shadow stuff, China is now more indebted than we are. I see a lot of indications of very unproductive type debt. I don't believe that the Chinese role, economically, will be as dynamic [00:59:00] going forward. I think we're in the vicinity of a top. That is going to actually adversely affect the role because up until now China has been the main engine of growth. I think that their situation will not be as reliable, will be more unstable, and while it appears that they have been always able to pull control levers and reverse downturns [00:59:30] very quickly, I think those tools will become less and less effective over time.

**Demetri Kofinas:** I should say also to listeners to our show who haven't heard our episode, I think it's episode 16 with Anne Stevenson-Yang. We spent the entire episode devoted to the Chinese financial system and the economy. You should definitely check that out.

I also want to read a quote that Dr. Hunt was effectively referencing. I have it here as well, which is by David Hume. "We have found where our government has mortgaged all its revenues that it necessarily sinks into a state of languor, inactivity, and impotence."

**Lacy Hunt:** That's the [01:00:00] quote I gave. I just didn't have the precise words in front of me.

**Demetri Kofinas:** I tend to be prepared.

**Lacy Hunt:** Languor is an old-fashioned word meaning from which we derived languishing. That's what happens. The deterioration in growth comes first and generally speaking, there is, what do you call, a very climatic event toward the end. That was certainly the case in some of these instances, which we've seen [01:00:30] historically.

**Demetri Kofinas:** Well, Dr. Hunt, I really appreciate you taking the time.

**Lacy Hunt:** That was a great interview, Demetri. Thank you.

**Demetri Kofinas:** It was my pleasure.

**Lacy Hunt:** I loved your questions. Thank you for doing your homework.

**Demetri Kofinas:** Thank you so much.

**Lacy Hunt:** And so thoroughly preparing for this today.

**Demetri Kofinas:** Thank you.

That was my episode with Lacy Hunt. I want to thank Dr. Hunt for being on my program. Today's episode was produce by me and David Lowenthal. Edits and engineering by Stylianos Nicolaou [01:01:00] For more episodes, you can check out our website at HiddenForces.io. Join the conversation through Facebook, Twitter, and Instagram at @HiddenForcesPod or send me an email.

Thanks for listening. We'll see you next week.